Operator Training

Automatic Tank Gauging

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of
Health and Environmental Control

Release Detection

- Means watching the tank system on a routine basis so that if a release occurs, it will be discovered as quickly as possible
- All tanks are required to have release detection except tanks that serve as emergency generators

Release Detection Requirement

Must use a method and/or equipment capable of finding a leak of 0.2 gallons per hour (gph) within 30 days

How much is 0.2 gallons per hour??

Release Detection

A leak of 0.2 gallons per hour is the same as losing 2 cola cans worth of fuel in an hour

Release Detection

Release detection requires that we look for a 0.2 gph leak at least once every month…

0.2 gph x 24 hours x 30 days =

144 gallons per month

Automatic Tank Gauge

An Automatic Tank Gauge (ATG) is a computerized system that automatically evaluates changes in fuel volume which can indicate a leaking tank.

Automatic Tank Gauge

The tank gauge

is connected to the probe

which is inserted through the top of the tank.

Automatic Tank Gauge

The probe is comprised of a rod and several floats that can freely move up and down along the rod. Inside the rod is an electrical current and the floats contain magnets. One float sits on top of the fuel and another float sits on top of any water present in the tank. As the floats move up and down with the rise and fall of fuel and water level, the magnets affect the electrical current. The probe reads these disturbances and sends the information to the console. Probes are calibrated for a individual tank and can only read the amount of fuel down to a certain level.

Automatic Tank Gauge

The ATG system may be used to collect, store, display, and print information such as fuel level, temperature, delivery status, as well as leak test results depending on the ATG's capabilities and how it is programmed.

Automatic Tank Gauge

Ensure that the ATG is compatible with the way you intend to use it and is capable of achieving passing test results. High-volume facilities may need a continuous monitoring ATG.

There are different probes for different fuels and different software for manifolded tanks or to support different monitoring plans (testing at 0.2 gph or testing at 0.1 gph).

Automatic Tank Gauge

MAY 21, 2009 12:05

CSLD TEST RESULTS

MAY 21, 2009 12:05

T 3:DIESEL
PROBE SERIAL NUM 271909

0.2 GAL/HR TEST
PER: MAY 21, 2009 PASS

T 4:E85
PROBE SERIAL NUM 413584

0.2 GAL/HR TEST
PER: MAY 21, 2009 PASS

T 5:OFFROAD DIESEL
PROBE SERIAL NUM 268639

0.2 GAL/HR TEST
PER: MAY 21, 2009 PASS

T 6:BIO DIESEL
PROBE SERIAL NUM 271908

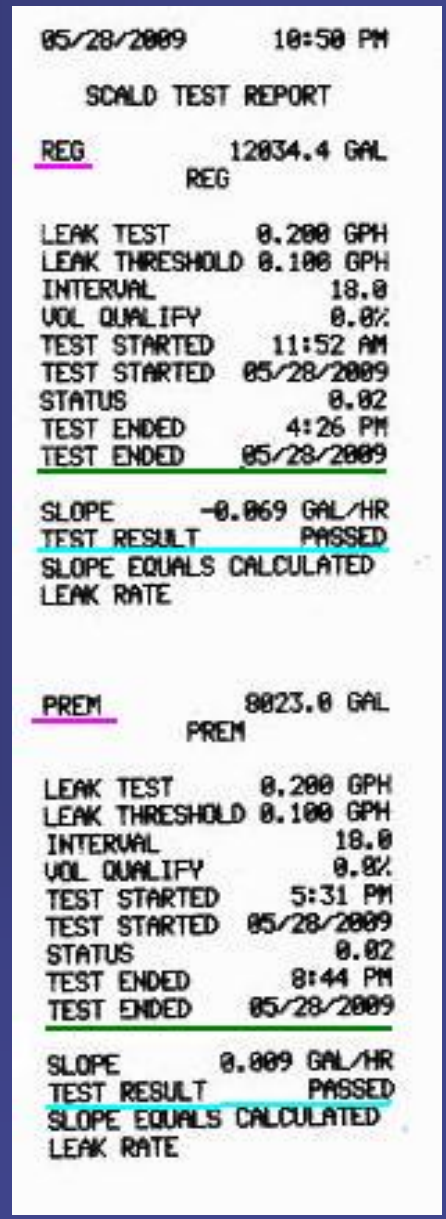
0.2 GAL/HR TEST
PER: MAY 21, 2009 PASS

T 7:KEROSENE
PROBE SERIAL NUM 268638

0.2 GAL/HR TEST
PER: MAY 21, 2009 PASS

* * * * * END * * * * *

The release detection requirement for Automatic Tank Gauging is one pass, per tank, per month. These slips show two different methods of Automatic Tank Gauging. Each slip, however,contains the same information: tank contents, date test performed, and results of test. To meet the requirement, the most recent twelve months of these slips should be on file at all times.



05/28/2009 10:50 PM

SCALD TEST REPORT

REG	12034.4 GAL
REG	
LEAK TEST	0.200 GPH
LEAK THRESHOLD	0.100 GPH
INTERVAL	18.0
VOL QUALIFY	0.0%
TEST STARTED	11:52 AM
TEST STARTED	05/28/2009
STATUS	0.02
TEST ENDED	4:26 PM
TEST ENDED	05/28/2009
SLOPE	-0.069 GAL/HR
TEST RESULT	PASSED

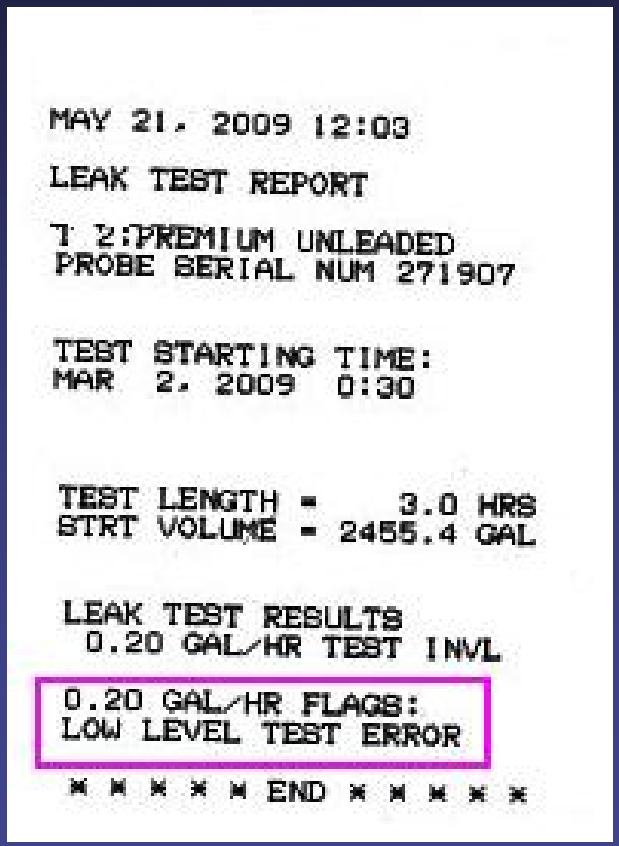
SLOPE EQUALS CALCULATED LEAK RATE

PREM	8023.0 GAL
PREM	
LEAK TEST	0.200 GPH
LEAK THRESHOLD	0.100 GPH
INTERVAL	18.0
VOL QUALIFY	0.0%
TEST STARTED	5:31 PM
TEST STARTED	05/28/2009
STATUS	0.02
TEST ENDED	8:44 PM
TEST ENDED	05/28/2009
SLOPE	0.009 GAL/HR
TEST RESULT	PASSED

SLOPE EQUALS CALCULATED LEAK RATE

Automatic Tank Gauge

Ensure that the date on the ATG is the current date and year.



MAY 21, 2009 12:03

LEAK TEST REPORT

T 2:PREMIUM UNLEADED
PROBE SERIAL NUM 271907

TEST STARTING TIME:
MAR 2, 2009 0:30

TEST LENGTH = 3.0 HRS
STRT VOLUME = 2455.4 GAL

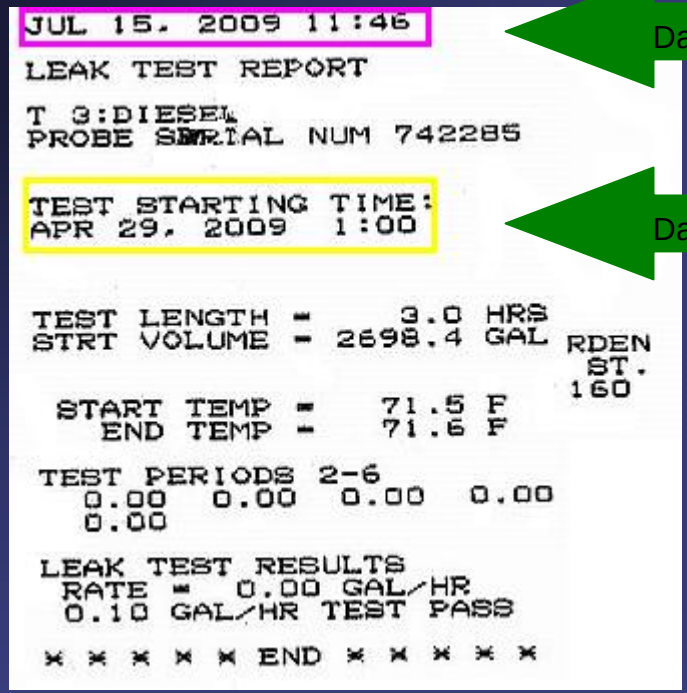
LEAK TEST RESULTS
0.20 GAL/HR TEST INVL

0.20 GAL/HR FLAGS:
LOW LEVEL TEST ERROR

* * * * * END * * * * *

Manage the tank inventory to ensure that there is enough fuel in the tank so that the leak test can be performed at least once a month.

Automatic Tank Gauge

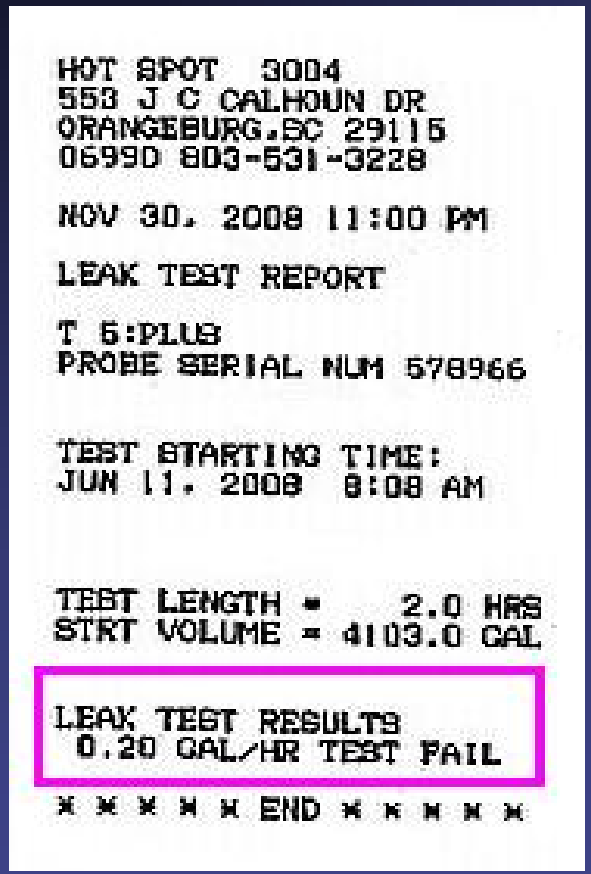


Date slip was printed by ATG

Date last test was performed

Make sure that a passing test is performed every month. If it gets towards the end of the month and a test has still not passed, take the tank out of service and manually make the ATG run a test. It is usually best to make the ATG test a couple of days after a delivery.

Automatic Tank Gauge



HOT SPOT 3004
553 J C CALHOUN DR
ORANGEBURG,SC 29115
0699D 803-531-3228

NOV 30, 2008 11:00 PM

LEAK TEST REPORT

T 6:PLUS
PROBE SERIAL NUM 578966

TEST STARTING TIME:
JUN 11, 2008 8:08 AM

TEST LENGTH = 2.0 HRS
STRT VOLUME = 4103.0 GAL

LEAK TEST RESULTS
0.20 GAL/HR TEST FAIL

* * * * * END * * * * *

If the monthly test result is a fail or anything other than a pass, call the UST Compliance Section immediately.

Automatic Tank Gauge

Pay attention to all alarms and report to the Department those that are critical (those that might indicate a release has occurred or is ongoing).